Attachment G: Smart board Specifications

Physical specifications

SMART Board™ 685ix interactive whiteboard
Size 77 1/2" W × 49 1/2" H × 5 1/8" D
(196.9 cm × 125.7 cm × 13 cm)
Active screen area
(Maximum interactive
Projected image)
74" W × 46 1/8" H
(188 cm × 117.2 cm)
87 1/8" (221.3 cm) diagonal
16:10 aspect ratio
Weight 42 lb. (19.1 kg)
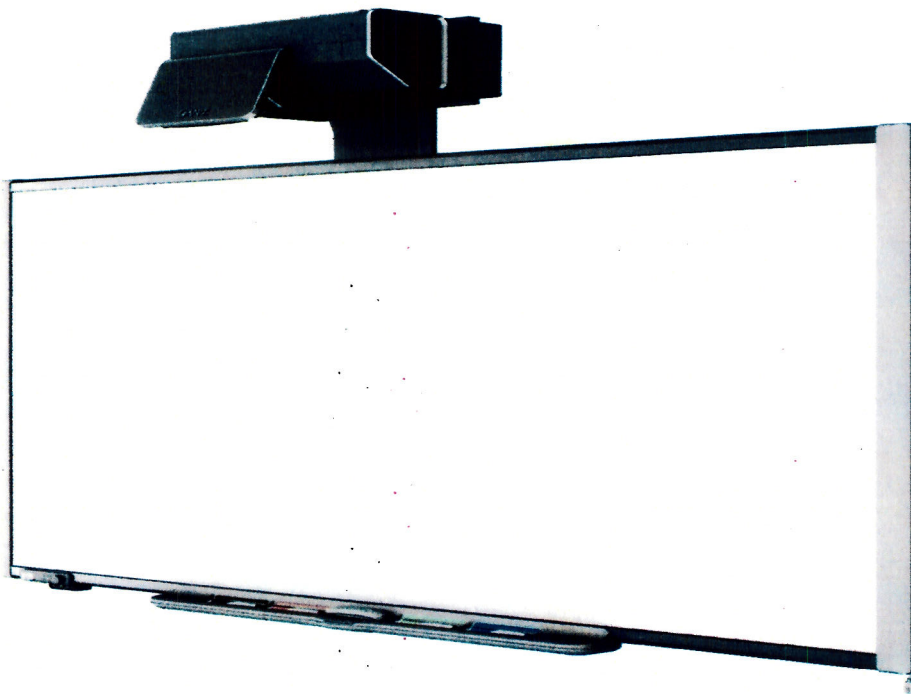All dimensions +/- 1/8" (0.3 cm). All weights +/- 2 lb. (0.9 kg).

SMART UX60 projector
Projector size 17 3/8" W × 10 1/2" H × 16 1/2" D (44.1 cm × 26.7 cm × 41.9 cm)
Remote control 1 5/8" W × 3 3/8" H × 1/4" D (4.1 cm × 8.6 cm × 0.6 cm)
Weight 22 lb. (10 kg)

ADA accessibility: Distance from floor to top of interactive white board is 63 ¾ inches or 161.9 cm. The distance from the floor to the bottom of the hanging bracket is 59 ½ inches or151.1 cm.

SMART Board™
600 and D600 series
Interactive Whiteboard

Installation Guide

Important information

Before you install and use your SMART Board™ 600 or D600 series interactive whiteboard, read and understand the safety warnings and precautions in this installation and user's guide. These safety warnings and precautions describe the safe and correct operation of your SMART Board interactive whiteboard and its accessories, helping you to prevent injuries and equipment damage.

NOTE
In this document, the term "interactive whiteboard" refers to your interactive whiteboard and its accessories and options.

Safety warnings and cautions

WARNINGS
• Failure to follow the installation instructions included with your interactive whiteboard, or found in this guide, could result in personal injury or product damage.

• Read the safety warnings, precautions and other important information published by your projector's manufacturer. Do not stare (or allow children to stare) directly into your projector's beam of light. Do not touch (or allow children to touch) your projector because it can become extremely hot during normal operation.

• Two people are required to safely mount your interactive whiteboard on a wall or floor stand because it might be too heavy for one person to safely maneuver alone. When you lift your interactive whiteboard, you and your assistant should stand on either side of the screen, supporting its weight at the bottom corners while balancing the top with your other hands.

• Do not leave cables on the floor where they can be a tripping hazard. If you must run a cable over the floor, lay it in a flat, straight line and secure it to the floor with tape or a cable management strip of a contrasting color. Handle cables carefully and avoid excessive bending.

• To reduce the risk of fire or electric shock, do not expose your SMART Board interactive whiteboard to rain or moisture.

IMPORTANT INFORMATION

• Use two wall-mounting brackets to install your SMART Board 685/D685 or 690/D695 interactive whiteboard. Using only one bracket could result in personal injury or product damage.

• Do not mount your SMART Board 600 or D600 series interactive whiteboard on a SMART Board 500 series interactive whiteboard floor stand. Using an older stand could result in personal injury or product damage. Only FS670 stands are certified for use with 660, 680 or D680 models.

• Do not mount a SMART Board 685, D685, 690 or D690 interactive whiteboard on a floor stand. Do not modify either your interactive whiteboard or a floor stand to make them compatible. Using a large interactive whiteboard with a small stand creates a tipping hazard.

• Do not mount the optional USB audio system speakers on a SMART Board 640 interactive whiteboard mounted on an FS640 stand. Using the speakers with the small stand creates a tipping hazard.

• Move your floor stand-mounted SMART Board interactive whiteboard with care. Before moving your floor stand-mounted interactive whiteboard, lower your interactive whiteboard to Position 2, and then proceed with care. Quick stops, excessive force and uneven surfaces might cause your interactive whiteboard to overturn. Before moving a floor stand, make sure that the anti-tip feet are retracted or locked in the up position.

• Do not stand (or allow children to stand) on a chair to touch the surface of your SMART Board interactive whiteboard. Instead, remount the product at the appropriate height, or use a SMART height-adjustable floor stand.

• Do not climb (or allow children to climb) on your wall- or floor stand-mounted SMART Board interactive whiteboard. Climbing on your interactive whiteboard or projector boom, or riding on your floor stand, could result in personal injury or product damage.

• There are no user-serviceable parts inside the pen tray. Only qualified personnel should disassemble the pen tray's printed circuit boards, and this procedure must be done with proper electrostatic discharge (ESD) protection.

• If you are using an RS-232 serial expansion module, a wireless Bluetooth® connection expansion module or a USB audio system, use only the power supply included with that product. These products do not use the same power supplies. Using the wrong power supply might create

a safety hazard or damage the equipment. If in doubt, refer to the specification sheet for your product to verify the power supply type.

CAUTION
• If you need to lean your interactive whiteboard against a wall before you mount it, make sure that it remains in an upright position, resting on its pen tray brackets, which are designed to sustain your interactive whiteboard's weight.

• Do not rest your interactive whiteboard on its side or on the top of its frame.

• Do not add any extra weight or excessive pressure to a wall-mounted interactive whiteboard or its pen tray. SMART designed the brackets to support only the weight of your interactive whiteboard during normal use.

• For operating safety and to prevent damage to your interactive whiteboard, connect its USB connector only to a computer that has a USB compliant interface and that bears the USB logo. In addition, the USB source computer must be compliant with CSA/UL/EN 60950 and bear the CE mark and CSA and/or UL mark(s) for CSA/UL 60950.

• If dust or small items prevent pen tray buttons from being pressed or cause constant button contact, remove the obstructions carefully.

• When transporting your SMART Board interactive whiteboard, repack it with as much of the original packaging as possible. This packaging was designed with optimal shock and vibration protection.

• Do not allow excess glass cleaner to flow into the crack between the lower frame and the writing surface, or into the pen tray slots.

Other precautions

If you own a SMART product other than a SMART Board 600 or D600 series interactive whiteboard, refer to the installation manual for your product for relevant warnings and maintenance instructions. To ensure operating safety and to prevent product damage, observe the following precautions.

• Don't set up or use your interactive whiteboard in an area with excessive levels of dust, humidity or smoke.

• If your SMART Board interactive whiteboard requires replacement parts, make sure that the service technician uses replacement parts specified by SMART Technologies or parts with the same characteristics as the original.

• Be aware that security cable locks aren't designed to be a solid protection measure because the lock can be torn out. However, potential thieves might be reluctant to try to sell a product with a broken security cable lock hole, which would readily identify it as a stolen item.

SMART Board interactive whiteboard wall-mounting kit

The 32" (81.3 cm) wall-mounting bracket comes with five screws and drywall anchors, enabling you to wall-mount your interactive whiteboard simply and securely.

Installing and securing the SMART Board interactive Whiteboard

Environmental requirements

Before installing the interactive whiteboard, review the following environmental requirements.

Environmental requirement Parameter

Operating temperature 41°F to 95°F (5°C to 35°C)

Storage temperature -40°F to 120°F (-40°C to 50°C)

Humidity • 5% to 80% relative humidity, non-condensing

• Humidity above 80% can cause slight wrinkling in the screen surface sheet. The wrinkles disappear when the humidity lowers.

Water and fluid resistance

• Intended for indoor use only. Doesn't meet any salt-spray or water ingress requirements.

• Don't pour or spray liquids directly onto your interactive whiteboard or any of its sub-components. These liquids can get into areas where they could damage sensitive electronic components.

Dust

• Moderate dust; Intended for use in office and classroom environments.

Not for industrial use where heavy dust and pollutants can cause malfunctions or impaired operation.

• Designed for pollution degree 1 (P1) as per EN61558-1, which is defined as "No pollution or only dry non-conductive pollution."
Electrostatic discharge (ESD)

• Designed to withstand electrostatic shock

• EN61000-4-2 severity level 4 for direct and indirect ESD

• No malfunction or damage up to 15kV (both polarities) with a 330 ohm, 150 pF probe (air discharge)

• Unmated connectors meet no malfunction or damage up to 8kV for direct (contact) discharge
Conducted and radiated emissions
EN55022/CISPR 22, Class B

Wall-mounting your SMART Board interactive whiteboard

Recommended heights for wall-mounting

Consider the general height of your user community when you choose a location for wall-mounting the interactive whiteboard. If you mount the interactive whiteboard too low, it might force tall people to bend over uncomfortably. If it's too high, other people might need to reach up too far. Also remember to leave enough room on either side so that you can stand beside it.

Tools required to wall-mount your interactive whiteboard

To wall-mount your interactive whiteboard you'll need the following tools:
- a Phillips No. 2 screwdriver (all screws must be tightened by hand)
- a ruler or measuring tape
- a carpenter's level
- a pencil or other marking device
- a stepladder

WARNINGS
• Failure to follow these instructions could result in personal injury and product damage.

• Two people are required to safely mount your interactive whiteboard because it might be too heavy for one person to safely maneuver onto the wall-mounting brackets. When you lift your interactive whiteboard, you and your assistant should stand on either side of the screen, supporting its weight at the bottom corners while balancing the top with your other hands.

CAUTIONS
• If you need to lean your interactive whiteboard against a wall before you mount it, make sure that it remains in an upright position, resting on its pen tray brackets, which are designed to sustain your interactive whiteboard's weight.

• Do not rest your interactive whiteboard on its side or on the top of its frame.

• To take full advantage of all the interactive features of your SMART product, you must connect a digital projector (not included).

• Some steps in the following procedure look different than illustrated if you have a SMART Board 685/D685 or 690/D690 interactive whiteboard.

Wall-mounting the interactive whiteboard

Follow this procedure to mount the SMART Board interactive whiteboard on a wood or metal framed wall surfaced with gypsum or drywall. Some notes are provided for concrete wall installations.

IMPORTANT

To wall-mount the interactive whiteboard
1. Using a pencil, a carpenter's level and a ruler or measuring tape, draw a horizontal line on the wall, centered on the mid-point of your interactive whiteboard's future position. If your projector is already mounted on the ceiling, this is roughly the center of your projected image.

2. Using the mounting bracket as a template, mark the location of the five mounting holes on the wall.
OR

If you're installing a SMART Board 685/D685 or 690/D690 interactive whiteboard, space your wall-mounting brackets' innermost screw holes 4" (10.2 cm) or 6" (15.3 cm) apart respectively, and then mark the location of the 10 mounting holes on the wall, as illustrated.

WARNING
Use two wall-mounting brackets to install your SMART Board 685/D685 or 690/D690 interactive whiteboard. Using only one bracket could result in personal injury or product damage.

3. Use the Phillips No. 2 screwdriver to secure an included self-tapping wall anchor at each mark.

CAUTION
Do not use a hammer to secure these anchors. If you're unable to screw an anchor flush to the wall, you might have encountered a stud. If this is the case, you don't need to use an anchor in this location. The stud will provide adequate support for the screw that secures the bracket to the wall.

NOTES
 – For a concrete wall, drill holes at the marks, and then insert concrete anchors (not included) into the holes.
 – If necessary, stand on a stepladder so that you can secure these wall anchors flush to the wall.
4. Using the screwdriver, secure the wall-mount bracket to the self-tapping wall anchors with the included screws.
5 With the help of another person, temporarily hang your interactive whiteboard on the center of its wall-mounting bracket.

Aligning the interactive whiteboard with projector

If your projector is installed in a fixed location, align the interactive whiteboard to the projected image before you secure the L-shaped brackets. A correctly aligned image fits squarely on your interactive whiteboard's screen. Each side of the projected image should extend almost to the edge of the display surface.

IMPORTANT
For SMART Board D600 series interactive whiteboards, it is important to align your interactive whiteboard and projector correctly so that the projected image divider in dual-user mode in SMART Notebook software aligns with the physical center of your interactive whiteboard. The actual divider will always be in the physical center of your interactive whiteboard, regardless of where your projected image falls.

To align the interactive whiteboard with your projector
1. Install or position your projector on a projector platform or stand if necessary, and then turn it on and point the lens of your projector at the center of your interactive whiteboard's screen.

2. Make fine adjustments to the image size, level and focus of the projected image, following your projector manufacturer's instructions.

3. Slide your interactive whiteboard sideways on its bracket to align it with the projected image.

4. Repeat steps 2 and 3 until your interactive whiteboard is properly aligned.

Completing the installation

Refer to the following procedure to finish installing the interactive whiteboard.

To complete the installation

1. Below the bottom frame, you'll find two L-shaped metal brackets. In the center of each bracket there is a metal tab. Push this tab back until it contacts the wall, and then mark the location of the mounting holes with your pencil.

2. Remove your interactive whiteboard from the wall, and then use the screwdriver to secure a self-tapping wall anchor at each mark.

NOTE

For a concrete wall, drill holes at the marks, and then insert concrete anchors into the holes.

3. With the help of another person, hang your interactive whiteboard back on the wall-mounting bracket, and then secure the L-shaped metal brackets to the wall anchors with the included screws.

NOTE

If you want to lock the interactive whiteboard with a security cable, see *Locking the pen tray to your interactive whiteboard* on page 16 before securing these brackets.

4. Position the pen tray in line with the two L-shaped metal brackets, and then slide it toward the wall until it rests snugly against the bottom frame of your interactive whiteboard. The pen tray clicks into place.

5. Route the modular I²C cable through the cable management channel under the lower-right end of the pen tray, and then insert its connector into receptacle **1**.

6. Press the cable into the cable management channel on the bottom of the tray. This step protects the modular cable's RJ11 connector from damage if the pen tray is removed without first disconnecting the cable.

7. Place the four pens and the eraser into their respective slots in the pen tray.

Securing the pen tray and interactive whiteboard

Because the SMART Board interactive whiteboard's pen tray is detachable, you might want to safeguard it—and your interactive whiteboard—by anchoring it with a security cable.

NOTE

Securing the pen tray can provide theft deterrence for your interactive whiteboard because the screws that secure your interactive whiteboard to the wall are located directly behind the pen

tray, and must be removed to detach the pen tray. In effect, when you secure the pen tray, you're also securing your interactive whiteboard if the security cable is tight.

Locking the pen tray to your interactive whiteboard

Underneath the pen tray, you'll find a lock slot that accommodates a security cable, such as a Kensington® lock.

IMPORTANT

Be aware that security cable locks are not designed to be a solid protection measure because the lock can be torn out. However, potential thieves might be reluctant to try to sell a product with a broken security cable lock hole, which would readily identify it as a stolen item.

To lock the pen tray to the interactive whiteboard

1. Before securing the pen tray brackets to the wall, loop the security cable behind the brackets.

2. Thread the lock end of the cable through the loop end of the cable.

3. Verify that the cable is tight enough that you can't remove the pen tray while the lock is in place, and then install the pen tray.

4. Insert the prong end of the security cable into the lock slot, and then complete the pen tray installation by securing it to the wall.

Securing the pen tray to the pen tray brackets

Since you can remove the pen tray without tools, you might want to securely attach it to its brackets. To do this, insert two No. 8/M4 screws (not included) into the holes indicated in the following illustration.